

**ENVIRONMENTAL PROTECTION
AIR QUALITY REGULATION PROGRAM
Air Pollution Control
Operating Permits**

Proposed Amendments: N.J.A.C. 7:27-8.1, 8.2, 22.1, 22.2, 22.6, 22.20, 22.25, 22.28B, 22.29, and 22.35.

Authorized By: Robert C. Shinn, Jr., Commissioner, Department of Environmental Protection

Authority: N.J.S.A. 13:1B-3, 13:1D-9 and 26:2C-1 et seq, especially 26:2C-8 and 26:2C-9.2.

DEP Docket Number: 16-98-06/664

Proposal Number: PRN 1998-

A public hearing concerning this proposal will be held on:

July 24, 1998, at 1:00 P.M. at

New Jersey Department of Environmental Protection
Hearing Room, 1st Floor
401 East State Street
Trenton, New Jersey 08625

Submit written comments by August 5, 1998 to:

Ann Zeloof, Esq.
Attention: Docket No. 16-98-06/664
Department of Environmental Protection
Office of Legal Affairs
PO Box 402
Trenton, New Jersey 08625-0402

The proposed amendments will become operative 60 days after their adoption (See N.J.S.A. 26:2C-8).

Interested persons may obtain a copy of the proposed amendments through the following methods:

1. The proposed rule amendments may be downloaded electronically from the Department of Environmental Protection's (Department's) Air Quality Regulations Bulletin Board. The compressed file, SUB22ERC.ZIP, contains WordPerfect 5.1 and ASCII documents and is located in file area #35

(Air; Props, Adopts & Notices). The data line number for the Bulletin Board is (609) 292-2006. (Data bit: 8; Parity: N ; Stop bit: 1.)

2. The proposed rule amendments may be downloaded electronically from the Department's Air Quality Regulations web site. It is accessible at <http://www.state.nj.us/dep/aqm/curformp.htm>

3. The proposed amendments may be inspected during normal office hours at the Department's public information center at 401 E. State Street in Trenton, or at one of the Department's Regional Enforcement Offices at the following locations:

Central Region:
Horizon Center, CN 407
Robbinsville, NJ 08625-0407

Metropolitan Region:
2 Babcock Place
West Orange, NJ 07052-5504

Northern Region:
1259 Route 46 East
Parsippany, NJ 07054-4191

Southern Region:
20 East Clementon Road
3rd Floor, Suite 302
Gibbsboro, NJ 08525-1175

4. The proposed amendments may be inspected at one of the following public libraries:

Trenton Public Library
120 Academy Street
Trenton, NJ 08608

Atlantic City Public Library
1 North Tennessee Avenue
Atlantic City, NJ 08401

Newark Public Library
5 Washington Street
P.O. Box 630
Newark, NJ 07102-0630

Alexander Library
Rutgers University
169 College Avenue
New Brunswick, NJ 08903

Camden Free Public Library
418 Fredericks Street
Camden, NJ 08103

New Brunswick Free Public Library
60 Livingston Avenue
New Brunswick, NJ 08901

Joint Free Public Library
Morristown & Morris County
1 Miller Road
Morristown, NJ 07960

5. The proposed amendments may be requested from the Department by e-mailing lmcgee@dep.state.nj.us, or by telephoning (609) 777-1345.

The agency proposal follows:

Summary

The Department is proposing to amend to N.J.A.C. 7:27-22, the Air Operating Permit Rule, and N.J.A.C. 7:27-8, the Permits and Certificates for Minor Facilities (and Major Facilities without an Operating Permit) Rule. These amendments are required by the United States Environmental Protection Agency (USEPA) for full Federal approval of New Jersey's Operating Permit Program. USEPA published these requirements in the May 16, 1996 Federal Register. (61 FR 24715). Several other amendments are also proposed.

The proposed amendments are summarized as follows:

- 1) Proposed N.J.A.C. 7:27-8.1, sets forth a definition of fuel cell systems. Proposed N.J.A.C. 7:27-8.2, designates certain fuel cells as equipment and control apparatus for which a permit and operating certificate are not required.
- 2) Proposed N.J.A.C. 7:27-22.1, sets forth a definition of fuel cell systems, and also adds certain fuel cell systems to the list of exempt activities.
- 3) Proposed N.J.A.C. 7:27-22.2(b), establishes the requirement that owners or operators of non-major medical waste incinerators, non-major landfills, and non-major calciners and dryers at mineral processing plants covered by Federal Clean Air Act Section 111 standards shall apply for and obtain an air operating permit.
- 4) Proposed N.J.A.C. 7:27-22.20(b) 7.i. and 7.ii., provide that preconstruction permits are incorporated into an operating permit through an administrative amendment only if the preconstruction permit has already met the procedural requirements, including provision of opportunity for public participation and USEPA review, that are required for operating permits under Title V of the Federal Clean Air Act. The proposed amendment would also ensure that preconstruction permits are incorporated only if the preconstruction permit includes compliance requirements that are the same as those required for an Operating Permit.
- 5) Proposed N.J.A.C. 7:27-22.29 (a) and (e), incorporate by reference the final nitrogen oxide regulations at 40 CFR 76, which were published in the December 19, 1996 Federal Register. These regulations control pollutants that contribute to acid rain. This incorporation, although not required for full program approval, was requested by USEPA.

In addition, several typographical and other wording corrections are proposed. These are listed below:

- 1) The definition of the phrase "De minimus emission threshold" at N.J.A.C. 7:27-22.1 contains a reference to Table C or Table D at N.J.A.C. 7:27-8, Appendix I. The reference should be to Tables A and B in the Appendix to Subchapter 22.
- 2) In the definition of "Insignificant source operation" at N.J.A.C. 7:27-22.1, the word "rather" should be changed to the word "rate."
- 3) At N.J.A.C. 7:27-22.6 (f) 5. iii, the reference should be to (f)5i and ii, not (a)5i and ii.
- 4) N.J.A.C. 7:27-22.25 (h) is reworded to clarify its meaning.
- 5) At N.J.A.C. 7:27-22.28B (f) 2.ii., the reference should be to (f)2i, not (i)2i.
- 6) At N.J.A.C. 7:27-22.29 (a) the word "title" should be capitalized.
- 7) At N.J.A.C. 7:27-22.35 (c) 1., the correct citation is 40 CFR 52.21, not 40 CFR 51.

Social Impact

The proposed amendments would have a positive social impact, because they clearly establish that certain specific non-major facilities that are subject to Federal Section 111 standards are also subject to New Jersey's Air Operating Permit requirements. The proposed amendments also clarify to owners and operators of these facilities their air pollution control responsibilities. Moreover, permittees could incorporate the provisions of a preconstruction permit into their operating permit only if the permitting procedures that were followed included opportunity for public participation and for USEPA review at least equivalent to that required under the operating permit program. Further, the proposed amendments clarify that applicants may incorporate provisions of a preconstruction permit into their operating permit only when the compliance requirements included in the preconstruction permit are at least equivalent to those required by the Air Operating Permit Program. This would provide assurance that there will be no loss of protection of public health and the environment due to lesser standards for compliance by facilities.

Finally, the proposed exemption of certain fuel cell systems should facilitate their use. Since these systems typically have greater efficiency than traditional electricity-generating systems, their use should lead to lower fuel use and lower emissions of carbon dioxide, a major greenhouse gas implicated in climate change. The lower fuel use and lower carbon dioxide emissions should have long-term social benefits.

Economic Impact

The proposed amendments required by the USEPA would result in increased permitting and reporting costs for a limited number of owners and operators of non-major facilities regulated under Federal Clean Air Act Section 111 rules. These impacts were quantified by the USEPA during the process of promulgating these Federal standards.

For major facilities regulated under Section 111, there would be no additional economic impact, as the owners and operators of all such facilities would have been required under the Operating Permit rules at N.J.A.C. 7:27-22 to obtain an operating permit in any case.

The proposed incorporation by reference of the final nitrogen oxides regulations at 40 CFR part 76, although it gives the Department the authority to implement Federal Phase II rules pertaining to nitrogen oxides, does not change these Federal requirements that apply to the affected facilities. Consequently, there is no additional economic impact from this portion of this proposal.

There may be positive economic impact for manufacturers and suppliers of fuel cells, as the proposed exemption for certain of these units should facilitate their entry into the marketplace.

There will be additional permitting and reporting costs for certain non-major facilities that are located in the State that are in categories regulated under Section 111. One such category is medical waste incinerators. Approximately 16 such facilities would be required to obtain air operating permits by this proposal. To the Department's knowledge at this time, these are:

Clara Maas Hospital

Schering Corporation
Elizabeth General Medical Center
Monmouth Medical Center
Morristown Memorial Hospital
Hoffman LaRoche
Wyeth-Ayerst Research
American Cyanamid
Merck and Co., Rahway
Rahway Hospital
Shore Memorial Hospital
Merck and Co., Somerville
Overlook Hospital
Helene Fuld Hospital
Pascack Valley Hospital
Novartis (Sandoz)

Another category is non-major landfills. With these proposed rule changes, the Department believes that each landfill (LF) on the following list would be required to obtain an operating permit:

Edgeboro LF
Sussex Co. 1-E LF
HMDC 1E LF
Middlesex County LF
BCUA/Kingsland LF
Ocean County LF
Monmouth County LF
Cumberland County LF
Burlington County LF
Cape May County LF
Linden LF

A third category is calciners and driers at mineral processing plants. Mineral processing plants are facilities that process or produce any of the following minerals, their concentrates, or any mixture of the which the majority (greater than 50 percent) is any of the following minerals or a combination of these minerals: alumina, ball clay, bentonite, diatonite, feldspar, fire clay, fuller's earth, gypsum, industrial sand, kaolin, lightweight aggregate, magnesium compounds, perlite, roofing granules, talc, titanium dioxide, and vermiculite. Data available to the Department is insufficient to ascertain exactly how many facilities may be in the calciner and drier category as defined above. There are approximately seven facilities in New Jersey in standard industrial classification (SIC) code 32 which are large enough to report on the Federal Toxics Release Inventory (pursuant to 42 U.S.C. Section 11023). Further, in the Department's right-to-know database, there are approximately 30 facilities in SIC code 3299, which are producers of non-metallic mineral products not elsewhere classified. It is possible that some of these plants are in the calciner and drier category as defined above and would therefore have to obtain an operating permit.

The owners and operators of each of the three categories discussed above, i.e., medical waste incinerators, landfills, and calciners and driers and mineral processing plants, would be required to

obtain an air operating permit and would incur increased costs entailed in applying for an Operating Permit. Such costs could include hiring a consultant to assist with preparation of the operating permit application.

Amendments to rules that address the fee structure for these non-major facilities that are required to obtain operating permits are not included in this proposal. The Department intends to propose revisions to its fee rules as a separate proposal.

Non-major medical waste incinerators, non-major landfills, and non-major calciners and driers at mineral processing plants would be subject to this subchapter 12 months after the adoption of this rule.

Environmental Impact

These amendments would have a positive environmental impact since additional facilities, primarily medical waste incinerators, would now need to obtain operating permits. These permits would include provisions to ensure that mercury waste separation programs are in place and effective in minimizing mercury emissions at these incinerators. Therefore, the proposed amendments would increase the protection provided to the public health and the environment.

The proposed incorporation by reference of the final nitrogen oxides regulations at 40 CFR part 76, since it does not change these Federal requirements that apply to the affected facilities, is not expected to offer significant additional environmental benefit beyond what would result from compliance to Federal rules.

The proposed exemption for fuel cell systems, to the extent that it facilitates their installation and use, would have a positive environmental effect because the exempted fuel cell systems have emissions of regulated pollutants lower than conventional methods of generating electricity, which the fuel cells would to some degree replace.

Manufacturer's specifications for one commercially available fuel cell, ONSI Corporation's 200-kw phosphoric acid unit with a natural gas fuel processor, list emissions of nitrogen oxides, carbon monoxide, and hydrocarbons (as methane) as 0.02, 0.20, and 0.02 pounds per million Btu, respectively, with emissions of sulfur dioxide virtually zero. According to a report by the Natural Resources Defense Council, "Choosing Clean Power: Bringing the Promise of Fuel Cells to New York," NRDC, March, 1997, actual emissions from operating fuel systems are typically lower than these manufacturer's specifications. Analysis by the Department, based on permitted numbers for an ONSI Corporation 200 kw unit, indicate that a 500 kw unit would have emissions of nitrogen oxides, carbon monoxide, volatile organic compounds, particulates, and sulfur dioxide no greater than 0.02, 0.04, 0.008, 0.003, and 0.003 pounds per hour, respectively. These values are significantly less than conventional electricity generation sources fired by coal, oil, or natural gas, which the fuel cell systems would to some degree replace.

Jobs Impact Statement

These proposed amendments would have little impact on employment and jobs in New Jersey. Only a few facilities would be affected, and the modest additional costs incurred by these facilities are not anticipated to affect their operations in such a way as to affect employment.

Federal Standards Analysis

Executive Order No. 27 (1994) and N.J.S.A. 52:14B-1 et seq., require State agencies which adopt, re-adopt or amend state regulations that exceed any Federal standards or requirements to include in the rulemaking document a comparison with Federal law. The proposed amendments, rather than exceeding Federal standards or requirements, bring New Jersey regulations into conformity with Federal requirements.

Regulatory Flexibility Statement

As required by the New Jersey Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq., the Department has evaluated the reporting, record keeping, and other compliance requirements that the proposed amendments impose upon small businesses. The Regulatory Flexibility Act defines “small business” as “any business which is a resident in this State, independently owned and operated and not dominant in its field, and which employs fewer than 100 full-time employees.” Based upon this definition, the Department estimates that no small businesses will be subjected to additional requirements by the proposed amendments.

Full text of the proposed amendments follows (additions indicated in underline, thus; deletions indicated in brackets [thus]):

7:27-8.1 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

...

“Fuel cell system” means an electrochemical device that converts the chemical energy in its fuel directly into electricity and heat. This term also includes any associated fuel processor, such as a reformer, that produces the fuel.

...

7:27-8.2 Applicability

- (a) (No change.)
- (b) New or altered equipment and control apparatus for which a permit and an operating certificate are not required, notwithstanding the provisions of (a) above, include:
1. - 4. (No change.)
 5. Equipment which is used for the sole purpose of woodworking by sanding, drilling, cutting or planing, unpainted wood or wood products, and which vents into a room[.], and
 6. A fuel cell system that uses hydrogen without a fuel processor, or a fuel cell system that uses a natural gas fuel processor and that has a power output no greater than 500 kilowatts.

7:27-22.1 Definitions

The following words and terms, when used in this subchapter, have the meanings given below unless the context clearly indicates otherwise.

...

“De minimus emission threshold” means, in respect to the emission of air contaminants, the quantity of any air contaminant which does not exceed the applicable de minimis emissions level set forth in [Table C or Table D at N.J.A.C. 7:27-8, Appendix I] Table A or Table B at N.J.A.C. 7:27-22, Appendix I.

...

“Exempt activity” means one of the following:

1. - 5. (No change)
6. A storage tank maintained under a pressure greater than one atmosphere provided that any vent serving such storage tank has the sole function of relieving pressure under emergency conditions; [or]
7. Equipment which is used for the sole purpose of woodworking by sanding, drilling, cutting or planing, unpainted wood or wood products, and which vents into a room[.] or
8. A fuel cell system that uses hydrogen without a fuel processor, or a fuel cell system that uses a natural gas fuel processor and that has a power output no greater than 500 kilowatts.

...

“Fuel cell system” means an electrochemical device that converts the chemical energy in its fuel directly into electricity and heat. This term also includes any associated fuel processor, such as a reformer, that produces the fuel.

...

“Insignificant source operation” means a source operation which is one of the types of source operations set forth in paragraphs 1, 2, 5, 6, 7, 8, 9, 11, 14, 16, 17, or 18, in the definition of “significant source operation,” and which is smaller than, or has a lower production [rather] rate than, specified in the applicability levels for significant source operations.

...

7:27-22.2 Applicability

- (a) (No change.)
- (b) [A non-major facility not included in (a) above shall become subject to this subchapter if EPA completes rulemaking requiring an operating permit for that category of non-major facilities pursuant to 40 CFR 70.3(b) 1 or 2.] This subchapter applies to a non-major facility which is one of the following:
 - 1. A facility with a medical waste incinerator subject to 40 CFR 60.30e through 60.39e (Subpart Ce) or 40 CFR 60.50c through 60.58c (Subpart Ec);
 - 2. A landfill, or a facility with a landfill, that is subject to 40 CFR 60.30c through 60.33c (Subpart Cc) or 40 CFR 60.750 through 60.759 (Subpart WWW); or
 - 3. A facility with a calciner and dryer at a mineral processing plant subject to 40 CFR 60.730 through 60.737 (Subpart UUU).
- (c) - (e) (No change.)

7:27-22.6 Operating permit application contents

- (a) - (e) (No change.)
- (f) An application for an initial operating permit shall include all information required by the application form, the instructions accompanying the application form, and the applicable completeness checklist(s) for the application. This shall include, but is not limited to, the following:
 - 1. - 4. (No change.)

5. The following information pertaining to emissions at the facility:

i. - ii. (No change.)

iii. For the facility as a whole, the facility's aggregate potential to emit, in tons per year, each air contaminant that may be emitted within the facility, including the emissions determined pursuant to [(a)5i and ii] 5i and ii above;

iv. - xii. (No change.)

6. - 12. (No change.)

(g) - (n) (No change.)

7:27-22.20 Administrative Amendments

(a) (No change.)

(b) A change may be made as an administrative amendment if the proposed change does not increase actual emissions, does not cause the emission of a new air contaminant or class of air contaminants, does not violate an applicable requirement, does not result in the source being subject to an applicable requirement to which it was not previously subject, and does not constitute a seven-day-notice change, minor modification, or significant modification, and the change is:

1. - 6. (No change.)

7. A change that incorporates into the operating permit provisions of a preconstruction permit, provided that the preconstruction permit:

i. Was issued through a process that meets the requirements set forth at [public participation requirements substantially equivalent to those for operating permits pursuant to] N.J.A.C. 7:27-22.11 (Public comment) and 22.12 (EPA comment); [and]

ii. Includes the compliance requirements [substantially equivalent to those for operating permits pursuant to] set forth at N.J.A.C. 7:27-1.31 (Right to enter); 22.9, 22.18 (Source emissions testing and monitoring), and 22.19 (Record-keeping, reporting, and compliance certification); and

iii. Includes a compliance plan that meets the requirements of N.J.A.C. 22.9 (Compliance plans)

8. - 13. (No change.)

(c) - (i) (No change.)

7:27-22.25 Department initiated operating permit modifications

(a) - (g) (No change.)

(h) During the period that the reopening is pending, the permittee shall comply with [the compliance schedule provided in any additional applicable requirement which applies to the facility and: until the final compliance deadline for any applicable requirement, the current operating permit; or after the final compliance deadline for any applicable requirement, the new applicable requirement and any provision of the current operating permit which is not affected by the new applicable requirements.]

1. the provisions of the current operating permit which are not affected by the new applicable requirement, and
2. the provisions of the new applicable requirement, including the schedule for compliance.

(i) - (o) (No change.)

7:27-22.28B Facility-specific emissions averaging programs

(a) - (e) (No change.)

(f) A permittee authorized to implement one or more facility-specific emissions averaging programs shall maintain an emissions log at the facility for all source operations subject to the averaging program(s). The permittee shall maintain this record on a daily basis. Specifically, the log shall reflect for each day:

1. (No change.)
2. For each group of source operations and for each air contaminant subject to an emissions cap, the following information:
 - i. (No change.)
 - ii. The total emissions, collectively, from all source operations in the group subject to the emissions cap. The unit of time used for this record shall be the same unit of time as is used for [(i)2i] (f)2i above.

(g) (No change.)

7:27-22.29 Facilities subject to acid deposition control

- (a) The Department hereby adopts and incorporates by reference the provisions of 40 CFR [part] 72 and 76, and any subsequent amendments thereto, for purposes of implementing an acid rain program that meets the requirements of [title] Title IV of the CAA. The term “permitting authority” shall mean the Department, and the term “Administrator” shall mean the administrator of the United States EPA. If provisions or requirements of 40 CFR [part] 72 and 76 conflict with or are not included in this subchapter, the [part] 40 CFR 72 and 76 [provision] provisions and requirements shall apply and take precedence.
- (b) - (d) (No change.)
- (e) The compliance plan for an affected Title IV facility shall meet the requirements of N.J.A.C. 7:27-22.9, except to the extent that these requirements are superseded by the acid deposition control requirements set forth at 42 U.S.C. § 7651a through 7651o or by applicable provisions of 40 CFR 72 or 76.
- (f) - (k) (No change.)

7:27-22.35 Advances in the air of air pollution control

- (a) - (b) (No change.)
- (c) For equipment and control apparatus with a potential to emit any hazardous air pollutant equal to or greater than the de minimis levels specified by the EPA pursuant to 42 U.S.C. 7412(g) or with a potential to emit five tons per year or more of any other air contaminant, the applicant shall document advances in the art of air pollution control, in accordance with the following criteria, as applicable:
1. Best Available Control Technology (BACT) where applicable, as set forth at 50 CFR 52.21 for air contaminant emission increases subject to standards for prevention of significant deterioration (PSD) pursuant to [40 CFR 51] 40 CFR 52.21;
 2. - 5. (No change.)

Based upon consultation with staff, I hereby certify that the above statements, including the Comparison with Federal Law Statement addressing the requirements of Executive Order 27 (1994), permit the public to understand accurately and plainly the purposes and expected consequences of these proposed amendments. I hereby authorize the proposal of these proposed amendments.

June 8, 1998
Date

/s/ ROBERT C. SHINN, JR.
Robert C. Shinn, Jr., Commissioner